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FACSIMILE TRANSMISSION

DATE: September 8, 2004

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Name	Fax Number	Phone Number
A. Michael Chambers, Examiner U.S. Patent and Trademark Office Group Art Unit 3753	703-872-9306	703-308-1016

FROM: Daniel R. Pote

PHONE: 602-382-6325

RE: Our Docket No. 40566.0100

U.S. Patent Application Serial No. 10/055,434

MESSAGE:

Transmitted herewith is the Response to the Office Communication of July 12, 2004
for the captioned matter. Thank you.

Sincerely, Daniel R. Pote, Reg. No. 43,011

ORIGINAL DOCUMENT: Will not be sent

NUMBER OF PAGES (Including Cover):

CONFIRMATION NO.:

CLIENT MATTER NO.: 99999.0000

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REQUESTOR: Daniel R. Pote

DIRECT LINE: 602-382-6325

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Date: 9-8-04 By: 
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**IN THE UNITED STATES PATENT
AND TRADEMARK OFFICE****PATENT**

In re application of:	Chou et al.	Docket No.:	40566.0100
Serial No.:	10/055,434	Group Art Unit:	3753
Filed:	January 23, 2002	Examiner:	Chambers, A. Michael
Title:	PHASE-CHANGE HEAT RESERVOIR DEVICE FOR TRANSIENT THERMAL MANAGEMENT	Confirmation No.:	7922

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Attached herewith is a Response to the Office Communication Amendment mailed July 12, 2004 in the captioned matter.

- I. Attached:**
☒ [X] Response to Office Communication
☒ [X] Acknowledgment Postcard

II. Small Entity Status

- ☒ [X] Small entity status under 37 C.F.R. §§1.9 and 1.27 is claimed.

FEE CALCULATION, CLAIMS AS AMENDED

	Claims remaining after amendment	Highest number previously paid for	Present Extra			
Total Effective Claims	8	-	18	=	0	x \$ 18.00 = 0.00
Independent Claims	2	-	3	=	0	x \$ 86.00 = \$0.00
If amendment enters proper multiple dependent claim(s) into this application for first time (per application)						\$280.00 + N/A
						Subtotal: 0.00

Application No. 10/055,434

**Fee Calculation: Request for Extension of Time
pursuant to 37 C.F.R. §1.17(a)**

<input checked="" type="checkbox"/> [X] Response filed within first month after due date – add	\$ 110.00 +	\$110.00
<input type="checkbox"/> [] Response filed within second month after due date – add	\$ 420.00 +	N/A
<input type="checkbox"/> [] Response filed within third month after due date – add	\$ 950.00 +	
<input type="checkbox"/> [] Response filed within fourth month after due date – add	\$1480.00 +	N/A
	Subtotal:	\$0.00

If one of the "small entity" boxes above is checked, enter half (1/2) of the Subtotal and subtract. -55.00

TOTAL FEES DUE \$55.00**III. Manner of Payment**

- ☐ [] Snell & Wilmer Check No. _____ in the amount of \$ _____.
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A duplicate copy of this sheet is attached for this purpose.
- ☐ [] No additional fee is required.

This statement does NOT authorize charge of the issue fee. The Commissioner is hereby authorized to charge any other fee specifically authorized hereafter, or any deficiency in the fee(s) filed, or asserted to be filed, or which should have been filed herewith or concerning any paper filed hereafter, and which may be required under 37 C.F.R. §§1.16-1.18 (deficiency only) now or hereafter relative to this Application and the resulting Official document under 37 C.F.R. §1.20, or credit any overpayment to Account No. 19-2814 for which purpose a duplicate copy of this sheet is attached.

Respectfully submitted,

Date: 9/8/04By: 
Daniel R. Pote, Reg. No. 43,011

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Date: 9-8-04 By: [Signature]
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**IN THE UNITED STATES PATENT
AND TRADEMARK OFFICE****PATENT**

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Serial No.:	10/055,434	Group Art Unit:	3753
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Commissioner for Patents
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Application No. 10/055,434

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Respectfully submitted,

Date: 9/8/04By: Daniel R. Pote, Reg. No. 43,911

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Date: 9-8-04By: [Signature]

Signature of Person Depositing Facsimile

**IN THE UNITED STATES PATENT
AND TRADEMARK OFFICE****UTILITY PATENT**

In re application of: Chou et al.

Serial No.: 10/055,434

Filed: January 23, 2002

Title: PHASE-CHANGE HEAT RESERVOIR
DEVICE FOR TRANSIENT THERMAL
MANAGEMENT

Docket No.: 40566.0100

Group Art Unit: 3753

Examiner: Chambers, A. Michael

Confirmation No.: 7922

RESPONSE TO OFFICE COMMUNICATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Commissioner:

In response to the Office Communication mailed July 12, 2004, the period of response which is hereby extended one (1) month to September 12, 2004, please consider the following response.

REMARKS

The Office Communication mailed July 12, 2004 states applicants' response of February 13, 2004 is not fully responsive to the prior Office Action because of the following omissions or matters:

The Response appears to be a response to a restriction of invention requirement rather than the election of species claims readable thereon.

The Office Action mailed September 10, 2003, argues that restriction is required under 35 U.S.C. §121 as follows:

- A) The species as illustrated in Figures 1-2

Application No. 10/055,434

- B) The species as illustrated in Figures 3
- C) The species as illustrated in Figures 4
- D) The species as illustrated in Figures 5
- E) The species as illustrated in Figures 6
- F) The species as illustrated in Figures 7
- G) The species as illustrated in Figures 8
- H) The species as illustrated in Figures 9

The Examiner argues that Applicants must elect a single disclosed species for prosecution on the merits. In this regard, the following election is made without waiver, estoppel and without prejudice to the filing of one or more related applications directed to the subject matter of the non-elected species.

Applicants submit that Claim 1 is generic, and traverse Examiner's arbitrary selection of various figures as species; however, Applicants elect Species A, the species as illustrated in Figures 1 and 2, and submit that claims 1, 3, 4, 5, 6, 7, 11, and 14 are readable thereon. Applicants submit that the foregoing election conforms this application to the Examiner's requirement to elect a single species and identify the claims readable thereon. A listing of the elected claims is listed hereto on page 3.

In view of the foregoing, Applicants respectfully submit that the present application is in condition for allowance, and earnestly solicits a Notice of Allowance at the Examiner's earliest convenience. The Examiner is invited to telephone the undersigned if such would advance prosecution of this Application in any way.

Date: 9/8/04

By: 

Daniel R. Pote, Reg. No. 43,011

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dpote@swlaw.com

Application No. 10/055,434

Listing of Claims Readable Thereon

1. A heat reservoir device for managing a heat input subject to transient conditions, said heat reservoir device comprising: a heat transfer subsystem having a thermal path thermally coupled to said heat input; a heat storage subsystem coupled to said thermal path of said heat transfer subsystem, said heat storage subsystem comprising a phase change material capable of changing phases in response to said transient conditions causing the temperature of said phase change material to rise above its phase change temperature.

3. The heat reservoir device of claim 1, wherein said heat transfer subsystem comprises a component selected from the group consisting of a heat pipe, a thermosyphon, and a liquid-cooling pump.

4. The heat reservoir device of claim 1, wherein said phase change material comprises a material selected from the group consisting of: a hydrated salt, sodium acetate, magnesium nitrate, paraffin, and water.

5. The heat reservoir device of claim 1, wherein said heat storage subsystem further comprises: a sealed case; a plurality of fins thermally coupled to said heat transfer subsystem and encapsulated by said sealed case, wherein said phase change material is thermally coupled to said plurality of fins.

6. The heat reservoir device of claim 5, wherein said heat transfer subsystem comprises a heat pipe, and wherein said plurality of fins comprises a series of disc-shaped fins axially distributed along and connected to said heat transfer subsystem.

7. The heat reservoir device of claim 5, wherein said heat transfer subsystem comprises a heat pipe, and wherein said plurality of fins comprises a series of radial fins thermally coupled to said heat

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transfer system.

11. The heat reservoir device of claim 5, wherein said plurality of fins protrude from a base coupled to said heat transfer subsystem.

14. A heat transfer system for managing a heat input subject to transient conditions, said heat transfer system comprising: a heat storage subsystem comprising a phase change material capable of changing phases in response to said transient conditions causing the temperature of said phase change material to rise above its phase-change temperature; a heat transfer subsystem thermally coupled to said heat input and said heat storage subsystem; a heat rejection subsystem coupled to said heat transfer subsystem, said heat rejection subsystem configured to transfer heat to an ambient environment.